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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER
JEAN GILLES, JUDE

ART UNIT	PAPER NUMBER
2143	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/790,726	HIPPELAINEN, LASSI
	Examiner	Art Unit	
	Jude J. Jean-Gilles	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2 and 4-19</u> is/are rejected.

7)☒ Claim(s) <u>3</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 March 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>08/25/2005</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is responsive to communication filed on 03/03/2004. Claimed priority

is granted from foreign application No: 03028897.1 with a priority date of 12/16/2003.

Information Disclosure Statement

1.   The references listed on the Information Disclosure Statement submitted on

08/25/2005 have been considered by the Examiner (see attached PTO-1449A).

Allowable Subject Matter

2.   **Claim 3** is objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> ·obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

4. **Claims 1, 2, and 4-19** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Baum, U.S. Publication No. 2004/0071164 A1 in view of

Donaldson, U.S. Patent No. 6,321,267 B1.

Regarding **claim 1**, Baum teaches the invention substantially as claimed. Baum

discloses a network device for managing addresses to be assigned to users of an IP

network (*fig. 10; the DHCP server is the network device*), the network device

comprising:

at least one queue for holding released addresses (*fig. 10, items 1009-1014; par.

0100, and 0022, 0023; note the pool of available; unused IP addresses 1009,*

represents one queue that can be used for holding released or available addresses);

the network device configured to:

detect that a packet has been addressed to a released address held in the

at least one queue (*par. 0101, and 0102; the IP address assignment request*

implies that the request in itself is made of packets that are addressed to the

released queue 1009).

Although it is understood that Baum teaches that the DHCP server 520 device

removes the leased address from the pool, and add a new entry in the address lease

information, Baum does not disclose specifically the step "returning the held address to

which the packet (*request for IP address assignment*) has been addressed to an end of

the at least one queue".

In an analogous art, Donaldson shows a plurality of device addresses that are

contained within a list (*queue*) and that IP an IP address detected by a sensor is

appended back to an IP filtering list called a blacklist (*see Donaldson, column 8, lines*

61-64; column 18, lines 24-26; and column 24, lines 39-41). These techniques provide

a performance improvement by quickly rejecting subsequent connections from IP

addresses that have already been rejected (*or released from a host*) by one of the filtering tests and return to the back of the queue (*see Donaldson ; column 8, lines 64-67*).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of detecting a released IP address of Baum to employ the features of appending an IP address to the back of a queue shown by Donaldson. This combination would facilitate increased security in a network thereby blocking relayed spam that involves databases of blacklisted IP addresses that can similarly be used to block packets (*see Donaldson; column 6, lines 14-21*), thereby reaching a leased IP address to detect fraudulent attempts to obtain an IP address in a network while providing security, screening and location verification services as stated by Baum in par. 0043. By this rationale, claim 1 is rejected.

Regarding **claims 2, and 4-19** the combination Baum-Donaldson discloses:

2. The network device according to claim 1, further configured to:

detect that an address of a user has been released (*see Baum; par. 0022, 0023*); and

add the released address to the end of the at least one queue (*see Donaldson, column 8, lines 61-64; column 18, lines 24-26; and column 24, lines 39-41; note that the released address of Baum employs the technique of appending the IP address of Donaldson*).

4. The network device according to claim 1, further configured to: upon detection that a

packet has been addressed to the released address held in the at least one queue (*see*

Baum; par. 0101, and 0102), send an error notification to a source of the packet (*see*

Donaldson; column 29, lines 56-62; note that the error message that is send to the

remote host represents the error message notification and that the remote host is the

source of the packet). The same motivation and reason to combine utilized in the

rejection of claim 1 is also valid for this claim. By this rationale, claim 4 is rejected.

5. The network device according to claim 1, wherein the network device is configured to

detect that a packet has been addressed to the released address held in the at least

one queue by receiving the packet addressed to the released address (*see Baum; par.*

0101, and 0102; it is important to realize that the IP assignment request conveyed to the

DHCP server contains the data packet addressed to the released address held).

6. The network device according to claim 2, wherein the network device is configured to

detect that an address of a user has been released by detecting a loss of a connection

which releases its address (*see Baum; par. 0023; the loss of connection is assume to*

be the failure to receive a response from the user, and that the IP address assigned to

the non-responding device is added back to the pool (queue) of available IP addresses).

7. The network device according to claim 1, wherein the network device is configured to

detect that a packet has been addressed to the released address held in the at least

one queue (*see Baum; par. 0101, and 0102*) by receiving an error notification indicating

an unused address (*see Donaldson; column 29, lines 56-62; note that the error*

message technique of Donaldson can be used for a variety of notification message

types. In the context of combining Baum with Donaldson, it would have been obvious

for an ordinary skill in the art to indicate an unused address utilized in Baum's system

using the error notification mechanism of Donaldson). The same motivation and reason

to combine utilized in the rejection of claim 1 is also valid for this claim. By this

rationale, claim 7 is rejected.

8. The network device according to claim 2, wherein the network device is configured to

detect that an address of a user has been released (*see Baum; par. 0022, 0023*); by

receiving a notification thereon (*see Donaldson; column 29, lines 56-62; note that the*

error message technique of Donaldson can be used for a variety of notification message

types. In the context of combining Baum with Donaldson, it would have been obvious

for an ordinary skill in the art to receive the notification utilized in Baum's system using

the error notification mechanism of Donaldson). The same motivation and reason to

combine utilized in the rejection of claim 1 is also valid for this claim. By this rationale,

claim 8 is rejected.

9. A network device for forwarding IP data packets (*see Baum, fig. 10*), the network

device configured to:

receive a packet addressed to an unused address (*see Baum; par. 0101, and*

0102; note that the IP address assignment request implies that the request in itself is

made of packets that are addressed to and received by the released queue 1009 of the

DHCP server 520); and

send an error notification to a network node for managing addresses, the error

notification indicating the unused address (*see Donaldson; column 29, lines 56-62; note*

that the error message technique of Donaldson can be used for a variety of notification

message types. In the context of combining Baum with Donaldson, it would have been

obvious for an ordinary skill in the art to indicate the unused address utilized in Baum's

system using the error notification mechanism of Donaldson). The same motivation and

reason to combine utilized in the rejection of claim 1 is also valid for this claim. By this

rationale, claim 9 is rejected.

10. The network device according to claim 9, wherein the error notification (*see*

Donaldson; column 29, lines 56-62) causes a return of a released address held in a

queue and corresponding to the unused address to an end of the queue, the queue

holding released addresses (*see Baum; par. 0101, and 0102; also see Donaldson,*

column 8, lines 61-64; column 18, lines 24-26; and column 24, lines 39-41; Donaldson

teaches an error notification technique and a mechanism for appending a released

address to an end of a queue. I would have been obvious for an ordinary skill in the art,

at the time the invention was made to use the error notification of Donaldson to trigger

the return of the released address of an unused device in the system of Baum and

append that address held in the back of the queue). The same motivation and reason

to combine utilized in the rejection of claim 1 is also valid for this claim. By this

rationale, claim 10 is rejected.

11. The network device according to claim 9, further configured to:

detect a loss of a connection which releases its address *(see Baum; par. 0023;*

the loss of connection is assume to be the failure to receive a response from the user,

and that the IP address assigned to the non-responding device is added back to the

pool (queue) of available IP addresses); and

send a notification about the released address to the network node for managing

addresses *(see Donaldson; column 29, lines 56-62; note that the error message that is*

send to the remote host represents the error message notification to the DHTP server

node managing the addresses). The same motivation and reason to combine utilized in

the rejection of claim 1 is also valid for this claim. By this rationale, claim 11 is rejected.

12. The network device according to claim 9, further configured to:

upon receipt of the packet addressed to the unused address *(see Baum; par.*

0101, and 0102; note that the IP address assignment request implies that the request in

itself is made of packets that are addressed to and received by the released queue

1009 of the DHCP server 520), send an error notification to a source of the packet *(see*

Donaldson; column 29, lines 56-62; note that the error message that is send to the

remote host represents the error message notification and that the remote host is the

source of the packet). The same motivation and reason to combine utilized in the rejection of claim 1 is also valid for this claim. By this rationale, claim 12 is rejected.

13. A system for managing addresses to be assigned to users of an IP network (*see Baum, fig. 10*), comprising:

a first network node for managing addresses (*DHCP server 520*), the first network node comprising:

at least one queue for holding released addresses (*fig. 10, items 1009-1014; par. 0100, and 0022, 0023; note that the pool of available, unused IP addresses 1009, represents one queue that can be used for holding released or available addresses*);

the first network node configured to:

detect that a packet has been addressed to a released address held in the at least one queue (*par. 0101, and 0102; note that the IP address assignment request implies that the request in itself is made of packets that are addressed to the released queue 1009*); and

return the held address to which the packet has been addressed to an end of the at least one queue (*see Donaldson, column 8, lines 61-64; column 18, lines 24-26; and column 24, lines 39-41; note that the released address of Baum uses the technique of appending the IP address of Donaldson*); and

a second network node for forwarding IP data packets (*the edge router 600 of fig. 6 represents the second node*), the second network node configured to:

receive a packet addressed to an unused address (*see Baum, par. 101; the edge router responds as it receives the IP address assignment request; Baum teaches that this is done "as is known in the art using DHCP protocol"; the unused address that the request (packets) is addressed to resides in the DHCP server node disclosed above*); and

send an error notification to the first network node, the error notification indicating the unused address (*see Donaldson; column 29, lines 56-62; note that the error message technique of Donaldson can be used for a variety of notification message types. In the context of combining Baum with Donaldson, it would have been obvious for an ordinary skill in the art to indicate an unused address utilized in Baum's system using the error notification mechanism of Donaldson*). The same motivation and reason to combine utilized in the rejection of claim 1 is also valid for this claim. By this rationale, claim 13 is rejected.

14. A method of managing addresses to be assigned to users of an IP network, the method comprising the steps of:

detecting that a packet has been addressed to a released address held in a queue holding released addresses (*see Baum; par. 0101, and 0102; note that the IP address assignment request implies that the request in itself is made of packets that are addressed to the released queue 1009*); and

returning the held address, to which the packet has been addressed, to an end of the queue (*see Donaldson, column 8, lines 61-64; column 18, lines 24-26; and column*

24, lines 39-41; note that the released address of Baum uses the technique of

appending the IP address of Donaldson). The same motivation and reason to combine

utilized in the rejection of claim 1 is also valid for this claim. By this rationale, claim 14

is rejected.

15. A method of forwarding IP data packets, the method comprising the steps of:

        receiving a packet addressed to an unused address*(see Baum; par. 0101, and*

0102; note that the IP address assignment request implies that the request in itself is

made of packets that are addressed to and received by the released queue 1009 of the

DHCP server 520); and

        sending an error notification to a network node for managing addresses, the error

notification indicating the unused address (*see Donaldson; column 29, lines 56-62; note*

that the error message technique of Donaldson can be used for a variety of notification

message types. In the context of combining Baum with Donaldson, it would have been

obvious for an ordinary skill in the art to indicate an unused address utilized in Baum's

system using the error notification mechanism of Donaldson). The same motivation and

reason to combine utilized in the rejection of claim 1 is also valid for this claim. By this

rationale, claim 15 is rejected.

16. The method according to claim 15, wherein the step of sending the error notification

(*see Donaldson; column 29, lines 56-62)* further comprises causing a return of a

released address held in a queue and corresponding to the unused address to an end

of the queue, the queue holding released addresses (*see Baum; par. 0101, and 0102;*

also see Donaldson, column 8, lines 61-64; column 18, lines 24-26; and column 24,

lines 39-41; Donaldson teaches an error notification technique and a mechanism for

appending a released address to an end of a queue. I would have been obvious for an

ordinary skill in the art, at the time the invention was made to use the error notification of

Donaldson to trigger the return of the released address of an unused device in the

system of Baum and append that address held in the back of the queue). The same

motivation and reason to combine utilized in the rejection of claim 1 is also valid for this

claim. By this rationale, claim 16 is rejected.

17. A computer program embodied on a computer-readable medium comprising

software code portions for performing steps of:

   detecting that a packet has been addressed to a released address held in a

queue holding released addresses (*see Baum; par. 0101, and 0102; note that the IP*

address assignment request implies that the request in itself is made of packets that are

addressed to the released queue 1009); and

   returning the held address, to which the packet has been addressed, to an end of

the queue (*see Donaldson, column 8, lines 61-64; column 18, lines 24-26; and column*

24, lines 39-41; note that the released address of Baum uses the technique of

appending the IP address of Donaldson). The same motivation and reason to combine

utilized in the rejection of claim 1 is also valid for this claim. By this rationale, claim 17

is rejected.

18. The computer program according to claim 17, further comprising a computer-readable medium on which the software code portions are stored (*see Baum; fig. 10, within DHCP server 520, memory 1006 is used to store software code for storing IP addresses, information and software code for performing the steps of the invention*).

19. The computer program according to claim 17, wherein the computer program product is configured to be directly loadable into an internal memory of the computer (*see Baum; fig. 10, within DHCP server 520, memory 1006*).

Conclusion

5.　　**THIS ACTION IS MADE NON-FINAL**. The Examiner strongly anticipates a

Final Rejection Office Action on the next response if amendments are not properly

made to the claims to perhaps place them in condition for allowance.

Any inquiry concerning this communication or earlier communications from

examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-

3914. The examiner can normally be reached on Monday-Thursday and every other

Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for

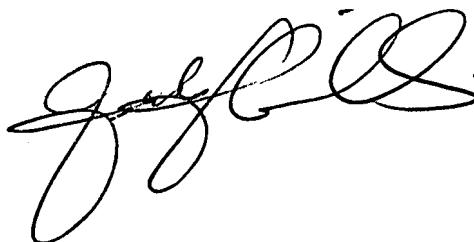the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (571) 272-

9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

September 28, 2007